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News Summary

Articles on inside pages

Columbia College in Chicago has grown in 20 years from a near-bankrupt speech-and-broadcasting school to a thriving, career-oriented, liberal-arts college. Story on Page 4.

"Suspicious manuscripts" containing inconsistent or startling data may be a sign of scientific fraud, editors at the annual meeting of the American Psychological Association were told. Story on Page 6.

Congress returns from a recess this week to the problem of whether to override President Reagan's veto of the $14.2-billion supplemental appropriations bill. Story on Page 7.

About 30,000 fewer veterans are receiving Pell Grants this year than last. Story on Page 7.

Televising college sports nets hundreds of thousands of dollars for many institutions, but not everyone is happy about the way the money is divided up. Story on Page 13.

Three colleges have been suspended from the National Association of Intercollegiate Athletics for using ineligible players on their basketball teams. Story on Page 13.

Polish officials are using the demonstrations there last week to drive a wedge between workers and academics. Story on Page 17.

Almost half of Russia's college graduates do not get jobs in the fields for which they were trained. Story on Page 17.

In Lebanon, investigators of the kidnaping of David S. Dodge, former acting president of the American University of Beirut, expect a break in the case soon. Story on Page 17.

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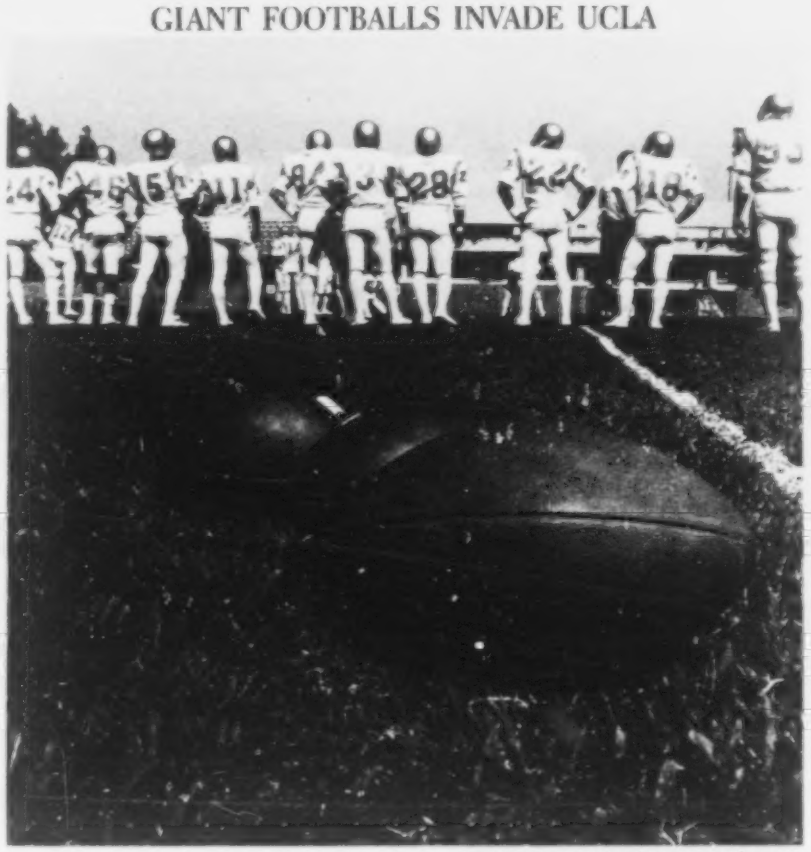
GIANT FOOTBALLS INVADE UCLA



PHOTOGRAPH FOR THE CHRONICLE BY TERRY O'DONNELL

They called this session a "photo opportunity." Our opportunist made this shot, then took off in sheer fright.

Interest in 'Computer Literacy' Sets Off Big Textbook Boom

By KAREN J. WINKLER

Computer science is the new kid on the block of college-textbook publishing. While formal textbooks in the field only began to appear a little over 20 years ago, today they number in the thousands.

▶ Prentice-Hall, the largest publisher in computer science, lists some 1,000 computer-related text and reference books.

▶ Addison-Wesley Publishing Company projects that computer-science books will account for over 15 per cent of its textbook sales in 1982, compared with 0.5 per cent in 1974.

▶ All told, there are some 3,000 computer-science texts available to undergraduates, says Doris Lidtke, a professor of computer science at Towson State College who compiles a yearly list of such books for libraries. That figure includes only books used in computer-science courses, not those on applications of computers in, for example, biology or science classes.

Market 'Opening Up'

"Until the last few years, computer science hasn't been one of the largest areas for textbooks, but now the term 'computer literacy' is beginning to mean something, and that is opening up the market," says J. Daniel Couger, a professor of management science at the University of Colorado at Colorado Springs. Mr. Couger edits *The Computing Newsletter* for business schools, which runs a yearly list of computer-science textbooks.

"I see the market growing just as large as any introductory subject required of all students—like English," he says.

"Twenty-five years ago," says Karl Karlstrom, longtime computer-science editor at Prentice-Hall, "there were almost no books.

"The universities began to teach the courses, and then the books followed."

In 1960, he says, there were probably a couple of dozen books available, mostly introductory texts covering the languages

Continued on Page 21, Column 2

Increase Sought for Science Education

A key GOP Senator asks $10 million more for NSF

By KIM McDONALD

WASHINGTON

Several Republican members of Congress, including a key Senator, are trying to get more money for science education, even though President Reagan has proposed eliminating all such programs except graduate fellowships.

And there are signs that even some White House aides would like to see the President relax that stand.

Three Republican members of Congress, including Sen. Harrison H. Schmitt of New Mexico, chairman of the Senate Subcommittee on Science, Technology, and Space, have introduced bills that would give money to young faculty members in scientific fields and support the training of science teachers for elementary schools.

Senator Schmitt is also attempting to get $10-million added to the $25-million recommended by the Senate Committee on Labor and Human Resources for science-education programs at the National Science Foundation in fiscal 1983. The House of Representatives has already voted to authorize $35-million.

'We've Got a Problem'

Bruce Abell, a special assistant to George A. Keyworth, II, President Reagan's science adviser, said the Administration still believed science education to be "a state and local responsibility." But Congressional aides say some Administration officials are working behind the scenes to find ways to provide more federal support for science education.

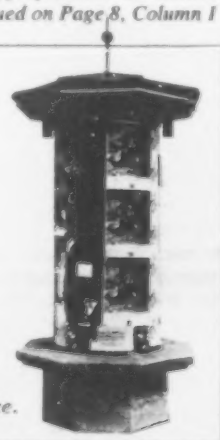
One aide said the President's Cabinet Council on Human Resources was reviewing recommendations that the Administration agree to support other science-education programs besides graduate fellowships.

"They agree that we've got a problem in the science- and engineering-education area," he said.

The House Appropriations Committee

Continued on Page 8, Column 1

Events in Academe: A Special Pull-Out Section



- Chronological listings from September through March: Page 32
- Index to subjects of meetings: Page 31
- Index to sponsoring organizations: Page 28
- Deadlines for fellowships, grants, papers, and prizes: Page 44
- One man's memories of scholarly meetings: Page 46

Readers may want to save this section for future reference.

Journal Editors Advised to Be Alert to Possibility of Scientific Fraud

Questionable material can undermine public support and waste the time of other investigators

CHERYL M. FIELDS

WASHINGTON

Scientific fraud can be hard to spot, but editors of science journals should be alert to "suspicious manuscripts," according to Marcia Angell, deputy editor of the *New England Journal of Medicine*.

Editors and their peer reviewers can't possibly check all the data on which the manuscripts they receive are based, she told a meeting of journal editors at the annual meeting here of the American Psychological Association.

"But they can be alert to such things as inconsistent data, data that are too neat, or data that are too startling—such as manuscripts that describe a giant step although science usually proceeds in small steps—or manuscripts that lead away from conclusions that other researchers in the field are drawing," Dr. Angell said.

Other things to watch out for, she said, are manuscripts that depend primarily on the researchers' own previous work, or too many articles' being published by an investigator. For example, she noted that a researcher at Harvard University's medical school, who was found last year to have concocted data for at least one study, had published nearly 100 papers and abstracts in a two-year period.

"That should have raised some eyebrows," she said.

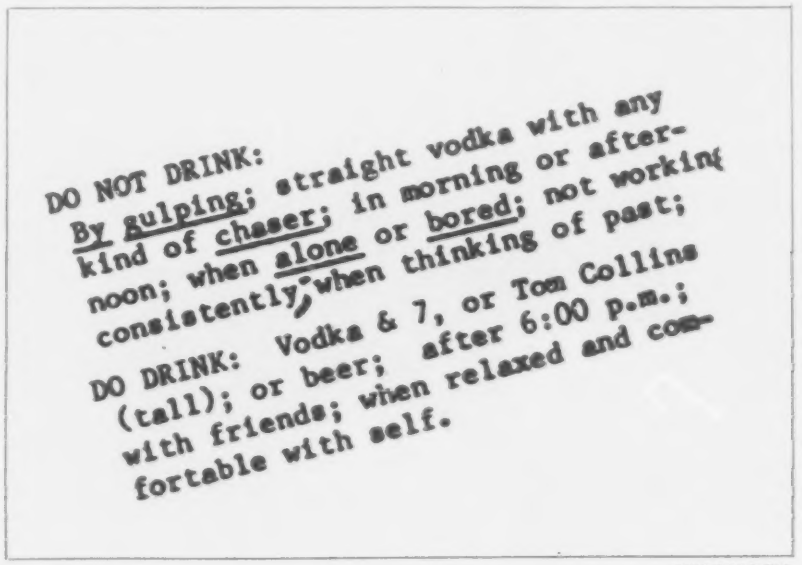
"If your peer reviewers raise questions about a paper, for example saying that the methods the researchers used couldn't have produced the results they claimed," she told the editors, "don't hesitate to send the paper out for a second round of reviews."

At the *New England Journal*, she said, if questions remain, "we will telephone the experimenters and ask for more information."

"Our responsiblity to preserve the integrity of the field is greater than our responsibility to publish a particular article," she said, because fraud in science undermines public support, lowers the morale of coworkers of the scientists caught falsifying or manipulating data, and wastes the time of other investigators, who have to go back and repeat the faulty work.

A Human Toll

Questionable studies can also take a human toll, said Nancy M. Henley, a professor of psychology at the University of California at Los Angeles and editor of the *Psychology of Women Quarterly*.


DO NOT DRINK:
By gulping; straight vodka with any kind of chaser; in morning or afternoon; when alone or bored; not working consistently; when thinking of past;
DO DRINK: Vodka & 7, or Tom Collins (tall); or beer; after 6:00 p.m.; with friends; when relaxed and comfortable with self.

SCIENCE MAGAZINE

"Science" magazine recently published a study following up a controversial project in which researchers reported they had trained alcoholics to control their drinking without giving it up entirely. Above, part of a wallet-sized card given to subjects in the original study.

She noted that *Science* magazine had published in its July 9 issue a 10-year follow-up study of a controversial project in which two researchers, Mark B. Sobell and Linda C. Sobell, had reported that, using behavior-modification techniques, they had successfully trained 20 alcoholics to control their drinking rather than totally abstaining from alcohol. Many researchers believe that total abstinence is necessary for people who have become physically dependent on alcohol.

"This research not only has been cited widely in popular literature, but has also been picked up in textbooks on medicine and psychology," Ms. Henley said.

Both the Sobells' published accounts of the experiment, and a follow-up study by other researchers three years later said that, based on repeated and extensive interviews with the subjects and their relatives, the Sobells' subjects were doing better than a control group trying to abstain from alcohol entirely.

However, Ms. Henley said, officials of Patton State Hospital in California, where the original experiment was conducted, persuaded three other researchers to do the 10-year follow-up because they knew that many of the subjects had been rehospitalized with drinking problems.

As reported in *Science*, the follow-up found that only one of the 20 alcoholics had "maintained a pattern of controlled drinking; eight continued to drink excessively—regularly or intermittently—despite repeated damaging consequences; six abandoned their efforts to engage in controlled drinking and became abstinent; four died from alcohol-related causes; and one, certified about a year after discharge from the research project as gravely disabled because of drinking, was missing."

No 'Probing Questions'

The new study reported data showing that many of the research subjects had been readmitted to hospitals because of drinking problems within a few months of the experiment.

Added Ms. Henley: "Some of the subjects of the study have organized to try to get the word out that alcoholics must be abstinent. They have said that contrary to what the Sobells claimed, there was very little contact with them after the program ended. If the researchers did telephone, they just chatted and did not ask the probing questions that would have revealed the problems the subjects were having."

Mary L. Pendery, one of the researchers who conducted the 10-year follow-up and a psychologist in the medical school at the University of California at San Diego, said the missing subject in the original experiment had been located since the article appeared in *Science*. He also reported having had continued drinking problems and little contact with researchers after the behavior-modification experiment ended, said Ms. Pendery, a psychologist in the medical school at the University of California at San Diego.

However, she said, neither the Sobells nor any of the investigators who published the three-year follow-up has acknowledged any impropriety in the conduct of their studies or in the published reports on them. Those researchers all have responsible positions, she said, and "all are being supported by their superiors, who are not asking for documentation of their studies."

Such situations can pose considerable problems for journals, Ms. Pendery said, noting that the Sobells had hired a prestigious Washington law firm to protect their interests when they learned that *Science* intended to publish the 10-year follow-up.

The Sobells, who are now conducting research at a World Health Organization foundation in Toronto devoted to investigating alcohol and drug dependence, have said they stand by their research and publications and that they believe a committee appointed by the foundation to review their work will vindicate them.

Worried over Lawsuits

A number of editors at the meeting said they were concerned about being sued if public controversies developed about articles printed in their journals, and they questioned their legal right to demand raw data from investigators.

If questions are raised about a manuscript before it is published, said Dr. Angell, "you can just refuse to publish."

Ms. Pendery said it was ironic that "journal editors can face legal threats in attempting to publish material that might expose a fraud, but they are in no danger if they publish a fraudulent study."

"Out-and-out fraud—the fabrication of data," Dr. Angell added, "is just one end of a spectrum of questionable scientific behavior," which also can include:

- " 'Fragmentation': publishing early, often, and in the smallest possible segments."
- "Statistical hanky-panky."
- " 'Cooking' data by ignoring results that don't fit the hypothesis."
- "Smoothing out data so that a line in a graph, for example, is straight instead of almost straight."

Some journals in recent years have published retractions when research studies were found to have been fraudulent or questionable, Dr. Angell said, but scientists haven't followed up by insuring that such studies are deleted from computerized indexes of journal articles.

She said the editor of one medical index had told her that he had never been asked to delete references to studies that were later called into question.

Journal editors also should insure that their publications are indexed so that references to retractions appear alongside references to the original article, Dr. Angell said.

Changes in Graduate Enrollment, 1980-81 to 1981-82

	Education	Humanities	Social sciences	Physical sciences	Engineering	Biological sciences
Institutions granting Ph.D. degrees	− 4.9%	− 2.2%	+ 2.4%	+ 4.8%	+ 6.9%	+ 0.3%
Public	− 4.4%	− 2.5%	+ 3.4%	+ 2.9%	+ 9.0%	n.c.
Private	− 7.4%	− 1.2%	+ 0.2%	+10.2%	+ 3.0%	+ 1.5%
Institutions granting master's degrees	−13.2%	+ 0.5%	+ 4.2%	+ 9.4%	+ 5.4%	− 3.4%
Public	−13.7%	− 0.5%	+ 3.0%	+ 8.2%	+ 5.1%	− 4.2%
Private †	− 7.6%	+15.2%	+10.9%	+22.4%	+ 9.0%	+ 5.4%
Total	− 7.0%	− 1.9%	+ 2.6%	+ 5.1%	+ 6.8%	− 0.1%
Public	− 6.9%	− 2.3%	+ 3.3%	+ 3.2%	+ 8.7%	− 0.5%
Private	− 7.4%	− 0.7%	+ 1.0%	+10.4%	+ 3.1%	+ 1.8%

† Because of low response rate, data for institutions in this category may be less reliable than those in other categories.

n.c. No change

SOURCE: SURVEY OF 363 GRADUATE INSTITUTIONS BY THE COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES AND THE GRADUATE RECORD EXAMINATIONS BOARD